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Claims

1. Method for encoding structured documents, especially XML
5 documents,
in which, in a first step, the structure of the schema (XMLS)
is normalized, where groups with elements and/or attributes are
simplified,
in which part of a bit stream or a bit stream (BS1) is produced
10 from the normalized schema as a function of a metaschema (SS)
with the aid of an encoding method (BiM-E).
2. Method according to Claim 1,
in which, in a further step, a further part of the bit stream
15 or a further bit stream (BS2) is produced from a document (XML)
as a function of the schema (XMLS) with the aid of the same
encoding method (BiM-E).
3. Method according to Claim 1 or 2,
20 in which element declarations and/or attribute declarations of
the schema definition of a structured document are restructured
in such a way that anonymous type definitions (AT0) are taken
out of the element declarations and/or attribute declarations
and are given a name and/or code which is used for referencing
25 purposes in the case of the corresponding element.
4. Method according to one of Claims 1 to 3,
in which, in place of type names and/or element names and/or
names of substitution groups, only numbers and also one or more
30 tables containing an allocation between numbers and type names
and/or element names and/or names of substitution groups are
encoded.
5. Method according to one of Claims 1 to 4,
35 in which one or more lists comprising the type names and/or
element names and/or names of substitution groups and also the
positions of the type names and/or element names and/or names

of substitution groups in the list are encoded in place of type names and/or element names and/or names of substitution groups.

6. Method according to one of the preceding claims,
5 in which information for the inheritance tree of types, global elements and/or substitution groups is encoded, where each type is described by an item of information about its type code with reference to the master type and the length of all type codes which refer to the type described
10 and/or each global element is described by the length of the SBC and an SBC and/or each element in a substitution group by the length of the substitution codes and a substitution code.
7. Method for decoding structured documents, especially XML
15 documents,
in which a schema (XMLS) is produced from part of a bit stream or a bit stream (BS1) as a function of a metaschema (SS) with the aid of a decoding method (BiM-D),
in which it is established in the bit stream whether the
20 structure of the schema has already been normalized, where groups with elements and/or attributes have been simplified, and no normalization is carried out in this case and
8. Method according to Claim 7,
25 in which, in a second step, a document (XML) is produced from a further part of the bit stream or a further bit stream (BS2) as a function of the schema (XMLS) with the aid of the same decoding method (BiM-D).
- 30 9. Method according to Claim 7,
in which, during the decoding of the schema (XMLS), a document (XML) is produced from a further part of the bit stream or a further bit stream (BS2) as a function of the already decoded part of the schema (XMLS) with the aid of the same decoding
35 method (BiM-D).
10. Method according to one of Claims 7 to 9,

in which element declarations and/or attribute declarations of a structured document are restructured in such a way that anonymous types (AT0), to which a name and/or code has been assigned for the purposes of transmission, are inserted in the
5 respective element declaration or attribute declaration by which the respective anonymous type is referenced.

11. Method according to one of Claims 7 to 10,
in which type names and/or element names and/or names of
10 substitution groups are decoded from the bit stream via numbers and also one or more tables containing an allocation between numbers and type names and/or element names and/or names of substitution groups.

12. Method according to one of Claims 7 to 11,
in which type names and/or element names and/or names of substitution groups are decoded from the bit stream via one or more lists comprising the type names and/or element names and/or names of substitution groups and also the positions of
20 the type names and/or element names and/or names of substitution groups in the list.

13. Method according to one of Claims 7 to 12,
in which information for an inheritance tree of types and/or
25 global elements and/or substitution groups is first decoded from the bit stream, where each type is described by an item of information about its type code with reference to the master type and the length of all type codes which refer to the type described
30 and/or each global element is described by the length of the SBC and an SBC and/or each element in a substitution group by the length of the substitution codes and a substitution code.

14. Device for encoding structured documents, especially XML
35 documents,
in which an encoder unit is present,

which, in a first step, normalize the structure of the schema (XMLS), where groups with elements and/or attributes are simplified,

5 which produce part of a bit stream or a bit stream (BS1) from the normalized schema as a function of a metaschema (SS).

15. Device for decoding structured documents, especially XML documents,

in which a decoder unit is present,

10 which produces a schema from part of a bit stream or a bit stream (BS1) as a function of a metaschema (SS),

in which it is established in the bit stream whether the structure of the schema (XMLS) has already been normalized, where groups with elements and/or attributes have been

15 simplified, and no normalization is carried out in this case.

16. Device according to Claim 14,

in which the encoder unit displays a configurable byte code interpreter which interprets information in a byte code and

20 which, depending on the configuration, produces a code from the structured document based on a byte code, which represents a path or a payload.

17. Device according to Claim 15,

25 in which the decoder unit displays a configurable byte code interpreter which is configurable by means of information from the bit stream and which, depending on the configuration, produces a path, payload or byte code from the bit stream based on a byte code.

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